

ABSTRACT OF THE DISCLOSURE

In a method for correcting pixels of an x-ray image data set, an x-ray exposure of a subject is acquired with an x-ray device that uses a storage film having a luminescent storage material layer serving as a radiation detector. The sensitivity of the luminescent storage material layer changes dependent on the accumulated x-ray radiation dose to which the storage layer has been exposed. After acquiring the x-ray exposure, the storage film is readout with a readout device and an x-ray image data set is generated that corresponds on a pixel-by-pixel basis with the x-ray exposure. Each pixel of the x-ray image data set is corrected with a correction value allocated to the corresponding pixel in the x-ray exposure, the correction value being adapted to the accumulated x-ray radiation dose to which the region of the storage film, containing the corresponding pixel, was exposed prior to acquiring the x-ray exposure.